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ABSTRACT

This study compared the success of traditionally prepared student teachers with contextually prepared students from Project Opportunity, which was designed to develop a sense of community among student teachers and between student teachers and college faculty and the faculty, staff, and students of partner schools. Groups of students were surveyed each semester as they graduated. Four cohorts of contextually prepared students completed surveys on their readiness and success. Two questionnaires were developed. One collected feedback from Project Opportunity and traditional student teachers, and the other obtained feedback from university supervisors and school cooperating teachers. Student surveys examined: prediction of success, confidence, professional background, preparation, personal attributes, instructional skill, classroom management, application of knowledge, holistic understanding, student interactions, university faculty interactions, and professional opportunities. Cooperating teacher/supervisor surveys examined all but the last four constructs. Results indicated that Project Opportunity was working well. Students, faculty, and public school personnel mentioned specific areas of excellence in participating students. Cooperating teachers and university supervisors noted a visible difference between the groups of student teachers in each major category. Project Opportunity students noted an increase in confidence as educators as well as increased strength in most other areas. (Contains 11 references.) (SM)

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Measuring Student Personal and Professional Confidence: The Impact of Two Teacher Preparation Programs

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Introduction

Effective teacher preparation has become a major topic of discussion at the national and state levels during recent years. We, as educators, strive to improve teacher education programs and have many ideas for restructuring college curricula to coordinate with long range and complex educational proposals that have been endorsed (Goodlad, 1991; Holmes Group, 1986; U.S. Office, 1991). A shared objective is improving the education of teachers by forming centers of collaboration between higher education and public schools to serve as models for inquiry and best practice (Byrd & McIntyre, 1999). Each group has independent recommendations, but areas of consensus do emerge: a) a collaborative or collegial K-12 school-university setting; b) methods of providing and modeling authentic assessment; c) earlier and an increased number of field experiences for preservice teachers; d) changed college curricula; and e) the opportunity to participate in a socialization process to enhance the culture of learning.

The experimental Iowa State University teacher preparation program, Project Opportunity, emerged in response to those recommendations through long-range planning and collaboration with faculty members, cohort site school personnel, and preservice students. Cohort groups of thirty elementary education students, secondary education students, and early childhood education students travel through their sophomore, junior, and senior years together taking selected courses and participating in expanded field experiences. A new cohort is established each year at alternating rural, urban, and suburban sites.

Since effective teacher education programs seem to produce a high percentage of teachers who are successful and remain in the field, evaluating the success of our program became imperative (Andrew, 1997). Several public school collaborative partnerships have formed in the past few years, yet in a study by Stallings and Kowalski (1990), it was discovered that since 1988 only three of them had attempted to evaluate the effects of those associations. On-going assessment of our program seems critical for growth and improvement.

Background

The Department of Curriculum and Instruction in the I.S.U. College of Education at our university began discussions among faculty and staff to imagine a new and better teacher preparation program early in 1991. An investigation was conducted in a reflective manner by studying many of the current teacher education reform models, attending regional and national conferences, and conversing with university faculty and administrators and public school faculty and administrators. The group then designed an experimental program built around several central themes and beliefs about teacher preparation. Those issues were the impetus for the creation of the program's outcomes and evaluation of the success of the program (Owen, 1993). The themes, which remain today, are a) integration, b) new learning roles, c) technology, d) diversity, and e) democracy.

Following the identification of the selected themes, the committee chose four topics to address: a) the nature of collaboration between K-12 schools and the university; b) the need for preservice teachers to experience quality field experiences earlier and more often (Connor & Killmer,

1996); c) the reconceptualization of formal academic coursework in both the College of Education and Liberal Arts and Sciences; and d) the formation of a cohort group to include majors in elementary, early childhood, and secondary education.

One objective designed for the cohort group was the formation of a bond for support and encouragement among members. Selecting cohort groups to participate in the redesigned contextual Project Opportunity program was the one major difference of this experimental program from other collaborative programs. The goal was to develop a sense of community among the cohort students and between them and the faculty, staff, and students of the partner school district and faculty of our college. Cementing relationships, sharing experiences, and producing on-going dialogue seems to be a common strength of cohort groups (Blankenship, Humphreys, Dobson, Gamble, Kind, 1989; Holmes Group, 1986).

Program Description

Members of the first cohort group of 30 chosen for Project Opportunity began in the fall of 1993 and graduated in the spring of 1996. In each fall semester since, a new group of 30 students have formed a cohort, spending their sophomore, junior and senior years together in a collaborative relationship at one school site. (A collaborative school site generally consists of 2-3 elementary schools, a middle school, and a high school.) The most recent cohort included in the original study graduated in the spring of 1999. The subsequent study focusing on personal and professional confidence began in the fall of 1999 and is continuing.

The selected students meet all the requirements of the traditional teacher education program in unique ways and also experience activities that are highly different from the traditional program. For example, field experiences have been added to the teaching strategies, social foundations and multicultural/nonsexist teaching courses. An English course has been adapted to investigate the relationship of television to education and new courses in democracy, and action research have been added. These courses are designed to foster the development of a reflective practitioner.

New courses are taken as a group, as well as many of the traditional professional courses. The four methodology courses (science, mathematics, reading/language arts, and social studies) are taken through an integrated approach during one semester. An 8-week daily practicum is part of that experience. Over 300 hours of early field experience are taken over the three-year period prior to student teaching, as compared to the traditional program requirement of 100 hours. At least one field experience occurs each semester ensuring continuity and all 300 hours of early field experience are completed at the cohort's designated collaborative site.

The Initial Study

With our larger goals in mind, a survey was prepared to determine whether the inaugural groups were meeting the challenge. The desired outcome was a notable improvement in skills displayed by the cohort students during their student teaching semester (as opposed to the traditionally prepared student teachers). Would the specially prepared students be more able in meeting their responsibilities as student teachers and thus be more effective, well-rounded, capable teachers?

Would they be more enthusiastic, confident, and competent? Questions were created to address a variety of proficiencies and opportunities, with the basic objective being to determine if a difference in preparation between the two groups of student teachers would ultimately show one program was more successful than another.

Methodology (Initial Study)

Our initial study, which began in the spring of 1996, compared the success of contextually prepared student teachers (Project Opportunity) with traditionally prepared student teachers. Groups of cohort students were surveyed each semester as they graduated. Four cohorts of contextually prepared students were surveyed on their readiness and success. Two questionnaires were developed, one to gather feedback from Project Opportunity and traditional student teachers, and one to obtain feedback from their university supervisors and school cooperating teachers. Likert scales ranging from four to five options were used with questions developed to survey the constructs listed below.

1. **Prediction of success**
2. **Confidence**
3. **Professional background**
4. **Preparation**
5. **Personal attributes**
6. **Instructional skill**
7. **Classroom management**
8. **Application of knowledge**
9. **Holistic understanding**
10. **Student interactions**
11. **University faculty interactions**
12. **Professional opportunities**

Note: Students were surveyed for all constructs, whereas cooperating teachers/supervisors were surveyed for only the first eight.

The student form contained 113 questions and was sent to 316 traditional student teachers. The return rate was 50% (N=158). The survey was also sent to all 54 Project Opportunity student teachers. Thirty-eight were returned, for a response rate of 70%.

To establish the reliability of the survey forms used in assessing the selected constructs, Cronbach's alpha statistic was utilized. Strong reliability was confirmed. Levene's test was used to determine whether pooled variance or unpooled variance t-tests should be used in establishing p-values for the constructs. The standard of a p-value of .05 or less was used to determine significance.

Student Results (Initial Study)

Table I summarizes the p-values for the twelve constructs selected for the student portion of the study. Student scores with a p-value of .05 and below indicate which of the constructs showed major differences between the Project Opportunity student teachers and traditional groups of student teachers. A "protected" 95% level of confidence requires a p-value of .05/12 =.0042 or less is needed to declare any result significant, thereby guaranteeing that all results are valid simultaneously.

Table 1

Constructs	Means (PO = Project Opportunity) (T = Traditional Students)	T-Tests	P-Values
Prediction of success	PO 3.6842 T 3.5316	1.874	.062
Confidence	PO 3.5877 T 3.4578	1.449	.149
Professional background	PO 3.5226 T 3.1492	4.648	<.001
Preparation	PO 3.7697 T 3.4805	4.614*	<.001
Personal attributes	PO 3.7947 T 3.6082	3.239*	.002
Instructional skill	PO 3.6368 T 3.3987	3.246*	.002
Classroom management	PO 3.4211 T 3.2070	1.786	.076
Application of knowledge	PO 3.4375 T 3.0646	4.787*	<.001
Holistic view of education	PO 3.4526 T 2.9399	5.404	<.001
Student interactions	PO 3.7632 T 2.5633	12.823*	<.001
University faculty interactions	PO 3.6228 T 2.9241	8.452*	<.001
Professional opportunities	PO 3.4064 T 2.5668	9.026	<.001

Note: * Indicates that unequal variance result was employed; otherwise, equal variances result is reported.

Table 2 reports the effect sizes, or predictive validity, for each student construct. Those statistics are listed in the Eta-Squared column. The Power column includes the mean level of each of the variables being analyzed, in order to distinguish between the correct and incorrect hypothesized values of the population parameters. Values of both results that are closest to +1 show strong evidence that the model is "good".

Table 2

Constructs	P-values	Eta-Squared	Power
Prediction of success	.062	.019	.482
Confidence	.149	.009	.257
Professional background	.000	.133	1.000
Preparation	.000	.050	.880
Personal attributes	.002	.027	.621
Instructional skill	.002	.033	.715
Classroom management	.076	.018	.463
Application of knowledge	.000	.094	.993
Holistic view of education	.000	.145	1.000
Student interactions	.000	.358	1.000
University faculty interactions	.000	.215	1.000
Professional opportunities	.000	.383	1.000

The p-values for nine of the twelve categories disclosed a marked difference between the two groups being studied. A closer look at the data showed the Project Opportunity student teachers had higher ratings. Professional behaviors, preparation, personal traits, instructional ability, applications of knowledge, holistic understanding, student interpersonal opportunities, faculty interaction, and professional opportunities all have p-values of less than .05.

Predicted future success, personal confidence, and classroom management did not show up significantly higher for the project group than the traditional group. Although cooperating teachers and university supervisors rated the project students high in each of those three categories, the students did not. (An explanation could be that as well-prepared, informed, and reflective students; they recognize the many difficult situations in teaching that can impact personal confidence. It was the lack of significant results for student confidence in the initial study that became springboard for our new study that is the focus of this paper.

Cooperating Teacher/Supervisor Results (Initial Study)

The combined cooperating teacher/supervisor survey form contained 44 questions. There were 931 traditional responses for a 74% response rate. For Project Opportunity cooperating teacher/supervisors it was 129 (a 60% response rate). Table 3 lists the p-values for each of the eight constructs, plus for one independent question, which was, "How prepared was the student teacher for student teaching?" As in the student portion of the study, a t-test for independent samples was used to get the p-values. A "protected" 95% confidence requires a p-value of .05/9 = .0056 or less is needed to declare any result significant, thereby guaranteeing that all results are valid simultaneously.

Table 3

Constructs	Means (PO = Project Opportunity) (T = Traditional Students)	T-Tests	P-Values
Prediction of success	PO 3.7952 T 3.5176	6.851*	<.001
Confidence	PO 3.7351 T 3.4860	6.207*	<.001
Professional background	PO 3.6505 T 3.3809	6.307*	<.001
Preparation	PO 3.7293 T 3.3845	8.055*	<.001
Personal attributes	PO 3.7958 T 3.5548	6.595*	<.001
Instructional skill	PO 3.5299 T 3.2120	6.410*	<.001
Classroom management	PO 3.5310 T 3.2720	5.236*	<.001
Application of knowledge	PO 3.4856 T 3.1237	7.717*	<.001
How prepared was the student?	PO 3.85 T 3.43	8.740*	<.001

Note: * Indicates that unequal variances result was employed.

Table 4 reports the predictive validity or effect sizes for the cooperating teacher and supervisor date, as well as the power values. Values closest to +1 reflect the strength of the model.

Table 4

Constructs	P-values	Eta-Squared	Power
Prediction of success	.000	.019	.999
Confidence	.000	.013	.987
Professional background	.000	.021	1.000
Preparation	.000	.026	1.000
Personal attributes	.000	.011	.967
Instructional skill	.000	.032	1.000
Classroom management	.000	.023	1.000
Application of knowledge	.000	.024	1.000
How prepared was the student teacher for student teaching?	.000	.023	.999

By studying the tables, it becomes obvious that in every case the difference between project student teachers and traditional student teachers, from supervisors and cooperating teachers points of view, was significantly in favor of Project Opportunity student teachers. Since cooperating teachers and supervisors are individuals who have more experience in evaluating student teachers and have the background to compare the two contrasting groups, it seems important to acknowledge the differences between each group on all constructs are significant at the .000 level. It is important to clarify, however, that this was not a blind study. Many respondents were aware that specific students were either in Project Opportunity or not. It should be noted, however, that some cooperating teachers and supervisors were not sure what would make a Project Opportunity student teacher different from a traditional student teacher.

Personal and Professional Confidence: The Subsequent Study

When comparing the student teacher results in the initial study with those of the university supervisors and cooperating teachers, a dilemma became apparent. Although the Project Opportunity students' responses were slightly higher for questions addressing the construct of "confidence", they were not higher to a significant degree. Yet, those who observed them in action (supervisors and cooperating teachers), rated them as significantly more confident. Verbal feedback and student teaching evaluations strongly supported the views of the teachers and supervisors.

Because the researchers originally predicted that "confidence" would be the trait most likely to differ between the project student teachers and the traditionally prepared student teachers, we felt

a closer study was warranted. There was the possibility that the survey questions addressing confidence used in the initial instrument may not have been effective. In order to study that possibility, a new questionnaire was developed to look at personal and professional confidence from a different perspective. The study began in 1999 and will continue indefinitely.

Methodology (Subsequent Study)

The researchers, in collaboration with a departmental research committee, developed an instrument to focus solely on student teacher confidence. Feedback from undergraduate and graduate students was utilized to finalize the questions. The resulting student teacher questionnaire contained thirteen questions. Twelve utilized the Likert scales with four response options. The final, open-ended question was, "As a teacher, I am great at_____".

The new surveys were given in the fall of 1999 and spring of 2000. To date, 41 surveys have been returned and analyzed. (Traditional students N = 26, Project opportunity students N = 15.) T-tests were run for questions one through thirteen and factor analysis was used to investigate any dimensions that might emerge. It became readily apparent that after one year of data collection, our numbers were still much too small to provide any significant findings.

The only significant survey question was "I like it when my classroom teacher gives me the opportunity to teach on my own". One hundred percent of the Project Opportunity students answered that question with a resounding "Definitely"; whereas, there was no area of 100% agreement with traditional student teachers.

Next the open-ended survey question was analyzed using the Nud*IST program. Four categories stood out as particularly important to the respondents involved in the study. They were

- Classroom management/organization
- Innovative/creative teaching
- Adaptability in teaching
- Positive staff/student interactions (not teaching specific)

The over-riding difference in the Project Opportunity students and the traditional students was in "adaptability in teaching". Fifty-seven percent of the Project students responded in that category as opposed to 25% of the traditional students. Interestingly, the category with the highest percentage of traditional responses was "classroom management/organization." Thirty-seven percent of the traditional total stated this was their area of "greatness". Only 7% of the project total felt this was their area of expertise. The other area of significance was in the "positive interactions" division, with 42% of the project students vs. 33% of the traditional numbers, naming this as their strongest trait.

Nud*IST assessment determined the study contained the implicit assumption that these self-reported comments accurately represented the teachers' expertise (their "greatness") and personal strong points as educators. However, because the teachers were not asked to report what was most important for their classrooms or their teaching, it should not be assumed that their statements represent or reflect on those issues primarily. If these teachers were deemed

successful and/or accomplished in their work then a secondary level of attribution might hold true, but only if they are successful.

It is feasible that these teachers represent a specific sub-population of the educational community, in that they have been self-selected and specially trained as Project Opportunity cohort members.

Findings/Conclusions (Subsequent Study)

The clearest conclusion to draw at this preliminary point in our secondary study is that results are volatile. This is largely because of the small sample size and possibly because the factors are not yet well defined. (The presence of 4-6 factors in ten items demonstrates a lack of simple structure.)

It is apparent that the major framework of the new program is working quite successfully. Students, faculty, and public school personal have noted specific areas of excellence in these students. As the cooperating teacher and university supervisor results indicate, there is a visible difference between the groups of student teachers in each major category, including confidence. Student surveys indicate strengths in nine of the twelve areas.

Cohort students have acknowledged, through informal conversations conducted in reflective seminars and in required journals, an apparent increase in confidence as educators. Most attribute this growth to the quality and quantity of field experiences offered in this program. Findings in a study by Reinhartz and Stetson (1997) uphold the idea that collaboratively prepared student teachers feel better prepared and more confident in their teaching than traditionally prepared students.

Public school educators and college supervisors support the emerging conclusion, based on survey data and other indicators, that the collaboratively prepared Project Opportunity student teachers demonstrate higher confidence levels, more advanced professional thinking, and a more holistic view in thinking than do traditionally prepared student teachers. As the initial survey noted, project students view themselves as well-prepared professionals with strong backgrounds of knowledge and the ability to apply that learning (Huba, Mugenda, Roberts, Rosenbusch, Torrie, & Whitaker, 1997). They feel competent in their interpersonal characteristics and their professional abilities and view the "big picture" of education with a healthy, holistic understanding. However, the question of being able to specifically measure the personal and professional confidence of student teachers remains. As additional data are collected and analyzed some statistically significant results will emerge. At this preliminary point in the study, no meaningful results can be reported. The researchers will incorporate new responses in December 2000 and June 2001. Findings at that point will determine whether this study will continue or take a different direction in the future.

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